Effect of previous mycorrhizal crop on AMF and bacterial wilt incidence of Tomato

Marie Chave[1], Péninna Deberdt[2], Harry Ozier-Lafontaine[3]

[1]INRA, UR 1321 ASTRO, PRAM, BP 214, Le Lamentin cedex 2, F-97285 Martinique, France
[2]CIRAD, UPR 103 HORTSYS, PRAM, BP 214, Le Lamentin cedex 2, F-97285 Martinique, France
[3]INRA, UR 1321 ASTRO, Domaine Duclos, Petit-Bourg, F-97170 Guadeloupe, France

OBJECTIVE : Assessment of a mycorrhizal previous crop chive (*Allium fistulosum*) for tomato bioprotection against bacterial wilt. Caused by a soilborne pathogen, *Ralstonia solanacearum,* bacterial wilt is responsible for high economic losses in horticultural crops, especially in tropical and sub-tropical areas. In Martinique (French West Indies), since 1999, a highly virulent population has been identified on solanaceous and cucurbitaceae crops (Wicker *et al*, 2007) and no resistant variety has been found yet.

M&M :

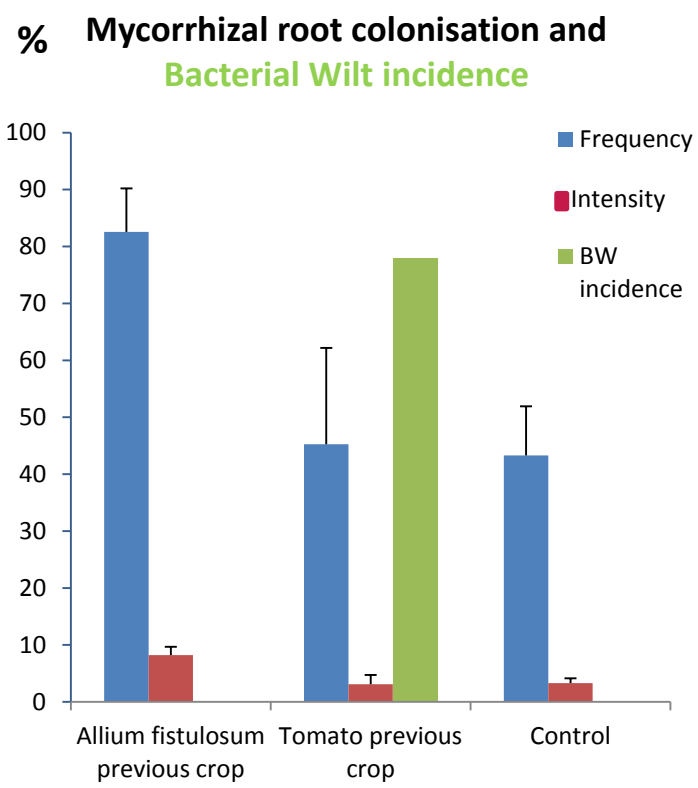
Tomato, cv Heatmaster, was cultivated under greenhouse conditions on different soils :

- Tomato soil
- Chive (*Allium fistulosum*) soil
- Sterilized control soil

Tomato mycorrhizal root colonisation and bacteral wilt incidence were assessed

RESULTS:

This experiment highlights the potential impact of AMF on tomato bacterial wilt bioprotection.



Wicker, E., Grassart, L., Coranson-Beaudu, R., Mian, D., Guilbaud, C., Fegan, M., and Prior, P. 2007. *Ralstonia solanacearum* strains from Martinique (French west Indies) exhibiting a new pathogenic potential. Appl. Environ. Microbiol. 73 (21):6790-6801